Duration of Antimicrobial Therapy for Complicated Intra-abdominal Infections

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Intra-abdominal infections continue to be a common problem for most hospitals in the United States, with approximately 300,000 cases of appendicitis occurring each year.1,2 Infectious Diseases Society of America (IDSA) guidelines for intra-abdominal infections recommend a treatment course of 4 to 7 days, depending on the clinical response.3 The STOP-IT trial was published in May and studied the duration of antimicrobial treatment for patients with complicated intra-abdominal infections. The trial compared 4 full days of antibiotics after a source-control procedure to antibiotics given until 2 days after the resolution of SIRS criteria. The primary outcome included a composite of surgical site infection, recurrent intra-abdominal infection, or death within 30 days. Secondary outcomes included duration of therapy and rates of subsequent infections. The investigators found that there was no significant difference between the control and experimental group regarding these outcomes. The results of this trial show that a shorter course of antibiotics appears to be similar in outcomes to antibiotics received until resolution of signs and symptoms of sepsis.4

Resources:

1. DeFrances CJ, Cullen KA, Kozak LJ. National Hospital Discharge Survey: 2005 annual summary with detailed diagnosis and procedure data. Vital Health Stat 13 2007;165:1-209.
2. Sartelli M, Catena F, Ansaloni L, et al. Complicated intra-abdominal infections worldwide: the definitive data of the CIAOW Study. World J Emerg Surg 2014;9:37.
3. Solomkin JS, Mazuski JE, Bradley JS, et al. Diagnosis and management of complicated intra-abdominal infection in adults and children: guidelines by the Surgical Infection Society and the Infectious Diseases Society of America. Clin Infect Dis 2010;50:133-6
4. Sawyer RG, Claridge JA, Nathens AB, et al. Trial of short-course antimicrobial therapy for intraabdominal infection. N Engl J Med. 2015;372(21):1996-2005.

Extra information:

 The STOP-IT trial shows support for shortened antibiotic use, something beneficial not only to the patient but for the institution. A shortened inpatient antibiotic course assists in decreasing the overall hospital cost for that patient and also limits the amount of time the patient is in contact with possible infectious microbes. There are, however, some limitations with the STOP-IT trial. The results of this trial only apply to a certain patient population, those with intra-abdominal infections who receive adequate source control. Source control is not always possible in every patient with intra-abdominal infections. The authors also did not list what empiric regimens were used and if any patients failed therapy. Length of hospital stay was also something not assessed between the control and experimental group. The article did not report the number of patients who had severe sepsis, septic shock or both. Overall, the results from this trial are applicable to all institutions and serve as a resource to back up recommendations for shortening therapy. As pharmacists, we are advocates of antimicrobial stewardship and having as much data as possible to support recommendations for therapy improves our ability to care for patients.